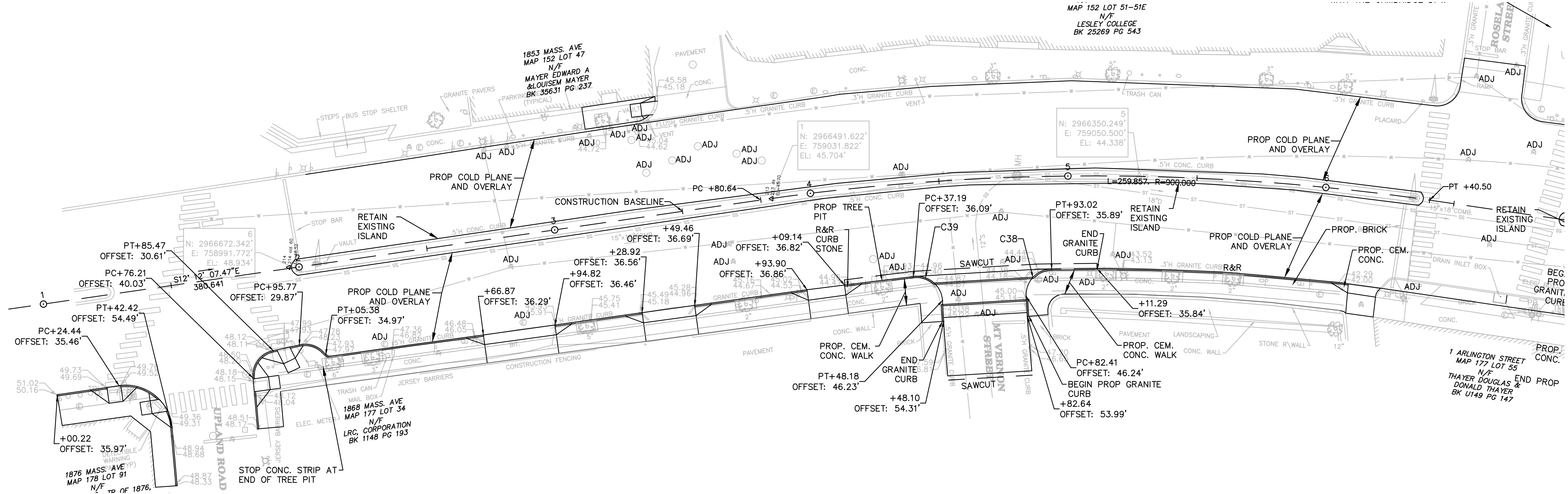
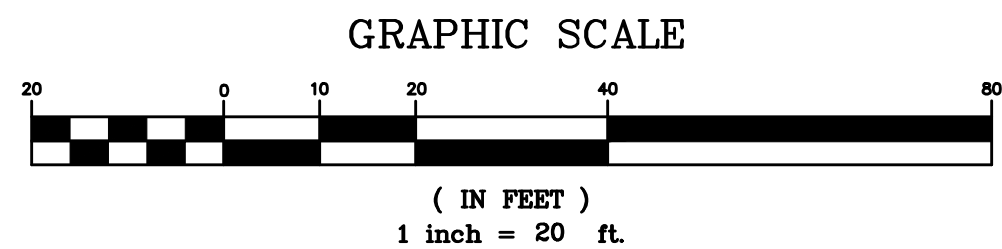
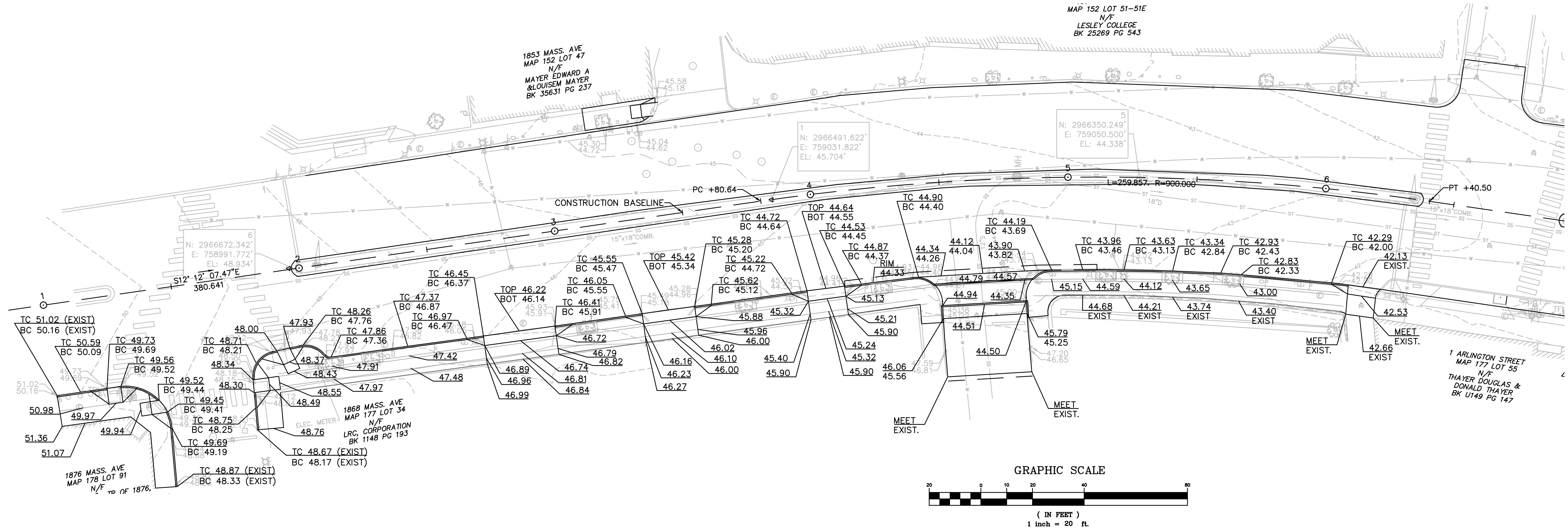


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F-2

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F-2

F-1

SHEET OF

CAMBRIDGE, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS
MASSACHUSETTS AVENUE
CONSTRUCTION AND GRADING PLAN

FILE NO.	CADD NO.	SCALE:	CONTRACT:	JOB NO.	DR BY	NAP	DSN BY	CHK BY	APP BY	LFK
		AS NOTED								

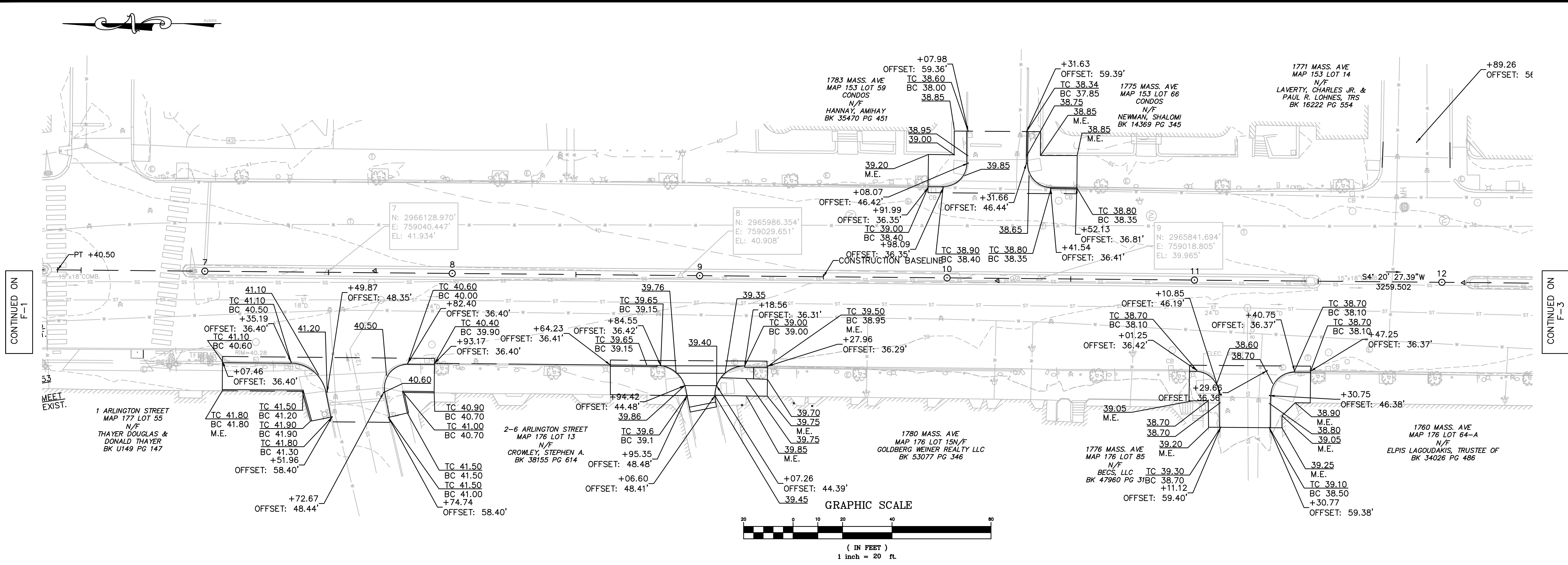
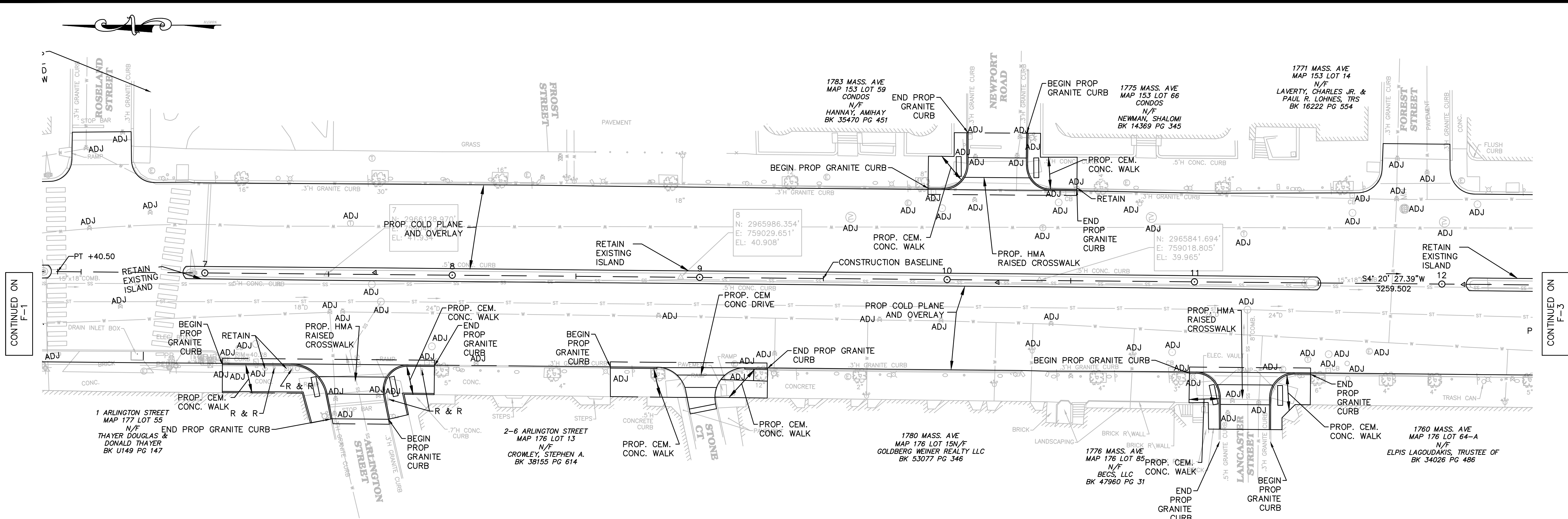
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CAMBRIDGE, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS

MASSACHUSETTS AVENUE
CONSTRUCTION AND GRADING PLAN

FILE NO.

CADD NO.

SCALE:

CONTRACT:

JOB NO.

DRBY

NAP

CHKBY

APPBY

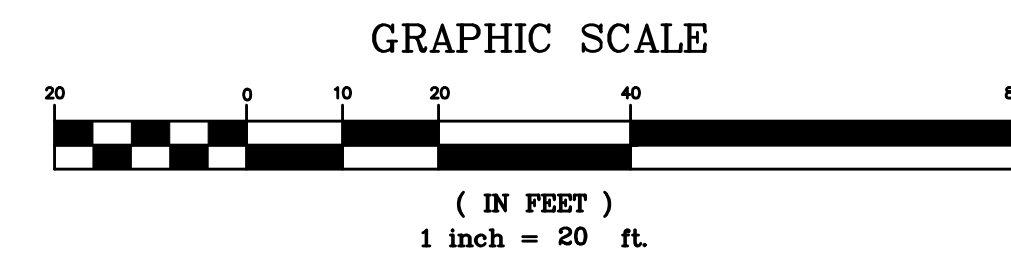
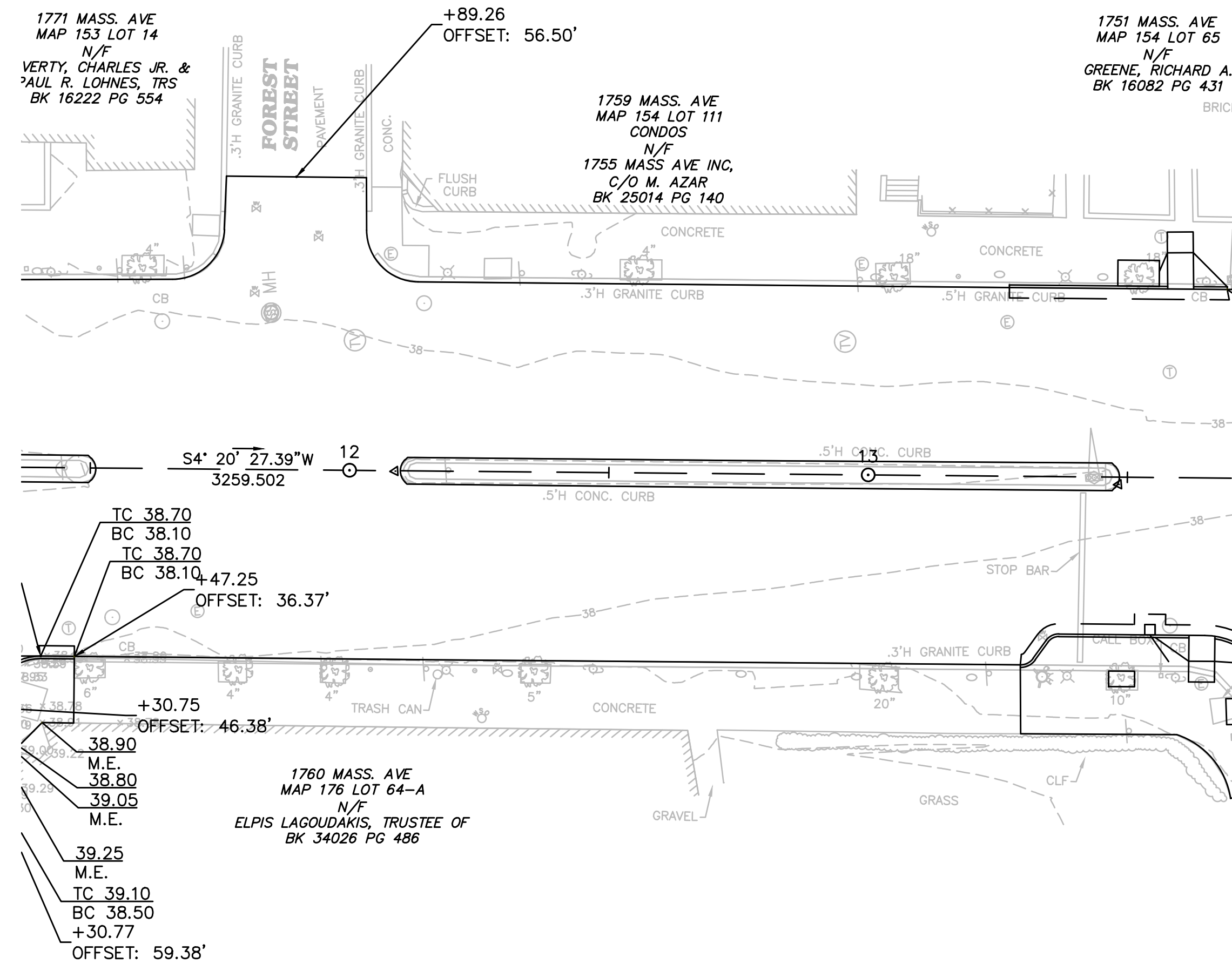
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F-2

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PEDESTRIAN RAMP TABLE

PEDESTRIAN RAMP NO.	PEDESTRIAN RAMP TYPE	PEDESTRIAN RAMP REFERENCE POINT B – MASS.		LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK	WIDTH OF RAMP	DEPTH OF LEVEL LANDING (4'-0" MIN)	ROADWAY GUTTER SLOPE	TRANSITION LENGTH (FT.)	
		STATION	OFFSET						LEFT SIDE	RIGHT SIDE
1	1	11+80 RT	44'-1"	4'-8"	17'-1"	5'-0"	4'-0"	0.5%	9'-1"	7'-9"
2	1	12+03 LT	43'-10"	6'-0"	>20'	5'-0"	4'-0"	0.8%	–	–
3	1	12+13 LT	29'-3"	6'-0"	19'-11"	5'-0"	4'-0"	0.5%	6'-3"	6'-8"
4	1	15+53 LT	44'-6"	4'-1"	8'-6"	5'-0"	4'-0"	1.5%	5'-0"	5'-6"
5	1	15+86 LT	45'-9"	4'-5"	8'-6"	5'-0"	4'-0"	1%	6'-6"	5'-3"
6	1	15+97 LT	30'-0"	6'-6"	20'-3"	5'-0"	4'-0"	2%	3'-6"	5'-6"
7	1	15+97 RT	29'-6"	5'-9"	20'-7"	5'-0"	4'-0"	0.6%	5'-0"	4'-11"
8	2	22+91 LT	30'-3"	8'-0"	26'-5"	5'-0"	4'-0"	2%	8'-3"	6'-6"
9	1	23+11 LT	43'-6"	5'-1"	17'-0"	5'-0"	4'-0"	0.6%	6'-6"	8'-0"
10	1	22+74 RT	30'-7"	4'-0"	17'-7"	5'-0"	4'-0"	0.8%	8'-5"	6'-6"
11	1	22+90 RT	50'-6"	7'-0"	18'-0"	5'-0"	4'-0"	< 0.5%	5'-3"	7'-11"
12	1	23+15 RT	46'-9"	6'-0"	>20'	5'-0"	4'-0"	2.3%	5'-5"	7'-7"
13	1	23+35 RT	36'-6"	10'-10"	20'-2"	5'-0"	4'-0"	1.5%	7'-2"	6'-10"
14	1	11+60 LT	36'-4"	7'-0"	12'-10"	5'-0"	4'-0"	0.4%	3'-0"	8'-0"
15	1	11+65 RT	30'-4"	5'-0"	18'-8"	5'-0"	4'-0"	0.4%	6'-6"	8'-0"

DRIVEWAY TABLE

DRIVEWAY NO.	DRIVEWAY TYPE	DRIVEWAY REFERENCE POINT		LENGTH OF PRIMARY RAMP (W1)	LENGTH OF TRAVEL WALKWAY (W2)	LENGTH OF DRIVEWAY FROM GUTTER LINE TO BACK OF WALK	DRIVEWAY WIDTH	ROADWAY GUTTER SLOPE	TRANSITION LENGTH (FT.)	
		B – MASS.							LEFT SIDE	RIGHT SIDE
		STATION	OFFSET							
1	2	14+49 LT	35’–11”	3.0’	10’–6”	13’–6”	22’–1”	1%	8’–0”	8’–0”
2	2	15+19 LT	36’–2”	3.0’	10’–6”	13’–6”	35’–0”	< 0.5%	8’–0”	8’–0”
3	2	15+68 RT	29’–7”	3.0’	16’–9”	19’–9”	18’–10”	1.1%	8’–0”	8’–0”
4	1	16+13 RT	29’–6”	3.0’	16’–9”	19’–9”	19’–1”	< 0.5%	N/A	N/A
5	1	18+80 RT	36’–9”	3.0’	8’–9”	11’–9”	19’–3”	< 0.5%	N/A	N/A
6	1	19+37 RT	36’–5”	3.0’	8’–9”	11’–9”	18’–0”	0.7%	N/A	N/A

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL REUSE AS MUCH OF THE EXISTING GRANITE CURB AS POSSIBLE. THE CONTRACTOR SHALL REPLACE GRANITE PIECES THAT ARE BROKEN OR HAVE SIGNIFICANT CHIPS OR GOUGES AS REQUIRED BY THE ENGINEER.
- ALL UTILITY STRUCTURE COVERS WITHIN THE LIMITS OF PEDESTRIAN RAMPS SHALL BE REPLACED WITH A NON-SLIP EQUIVALENT.
- ALL PROPOSED WALK SHALL BE CEMENT CONCRETE UNLESS OTHERWISE NOTED.
- WHEN MEETING EXISTING CEMENT CONCRETE SIDEWALK PAVEMENT SHALL BE SAWCUT ON LIMIT LINES AS INDICATED ON PLANS.
- ALL SIGNS SHALL BE REMOVED AND RESET WITH A NEW SIGN POLE AS REQUIRED BY THE ENGINEER.
- REMOVE AND REPLACE ALL EXISTING FRAME AND GRATES AS REQUIRED BY THE ENGINEER.
- ALL SIDEWALK RECONSTRUCTION SHALL END AT THE LIMIT OF WORK UNLESS A COMPLIANT SECTION OF WALKWAY IS LOCATED WITHIN 15' OF THE LIMIT OF WORK.
- ALL PROPOSED DRAIN LINE SHALL BE 12" PVC UNLESS OTHERWISE NOTED.
- ALL TREES WITHIN THE PROJECT LIMIT SHALL BE PROTECTED.

PAVEMENT MARKING NOTES:

- ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, PLACED AS SHOWN ON THE PLANS OR AS REQUIRED BY THE ENGINEER AND SHALL MATCH EXISTING MARKINGS AT THE LIMIT OF WORK.
- ALL PROPOSED SYMBOL MARKINGS SHALL BE PAVEMENT MARKING TAPE (380 I SERIES).
- LANE LINES SHALL BE 6 INCHES WIDE. STOP BARS SHALL BE 12 INCHES WIDE, CROSSWALKS SHALL BE 24 INCHES WIDE.
- THE CONTRACTOR SHALL LAYOUT ALL PROPOSED PAVEMENT MARKINGS AND RECEIVE APPROVAL FROM CITY OFFICIALS PRIOR TO APPLICATION OF PAVEMENT MARKINGS.

Curve Table		
Curve #	Radius	Length
C1	10'	16'
C2	10'	16'
C3	5'	8'
C4	15'	23'
C5	10'	7'
C6	7'	5'
C7	10'	16'
C8	11'	17'
C9	5'	5'
C10	7'	7'
C11	5'	5'
C12	7'	7'
C13	10'	17'
C14	3'	3'
C15	3'	3'
C16	3'	3'
C17	3'	3'
C18	10'	16'
C19	5'	5'
C20	5'	5'

Curve Table		
Curve #	Radius	Length
C21	5'	5'
C22	5'	5'
C23	7'	7'
C24	3'	3'
C25	3'	3'
C26	3'	3'
C27	5'	5'
C28	5'	5'
C29	5'	8'
C30	10'	16'
C31	10'	16'
C32	10'	16'
C33	10'	15'
C34	12'	22'
C35	12'	16'
C36	10'	18'
C37	15'	20'
C38	10'	16'
C39	10'	16'
C40	18'	36'

Curve Table		
Curve #	Radius	Length
C41	14'	16'
C42	5'	7'
C43	9'	14'
C44	10'	16'
C45	16'	25'
C46	7'	7'
C47	5'	5'
C48	5'	8'
C49	10'	16'

F-4

FILE NO.

CADD NO. -

SCALE: -

JOB NO. -

DR.BY

NAP

CHK.BY

LFK

APP.BY

LFK

CONTRACT: -

AS NOTED

CONSTRUCTION AND GRADING PLAN

MASSACHUSETTS AVENUE

CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS

CAMBRIDGE, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS

REGISTERED PROFESSIONAL ENGINEER

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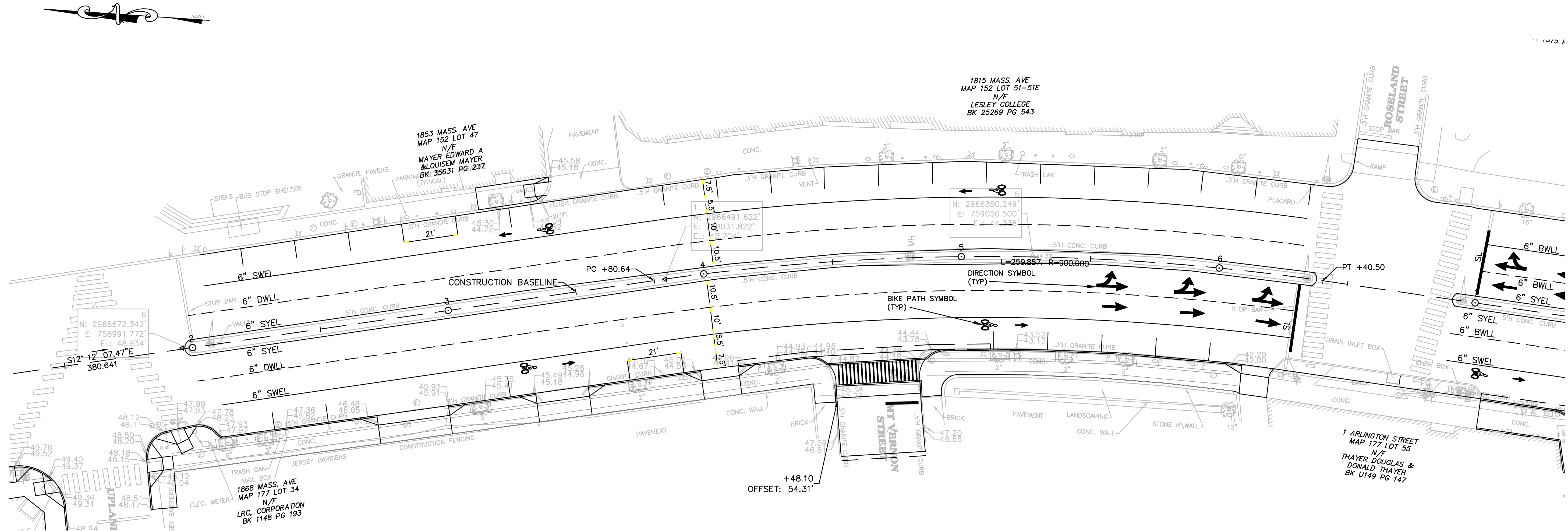
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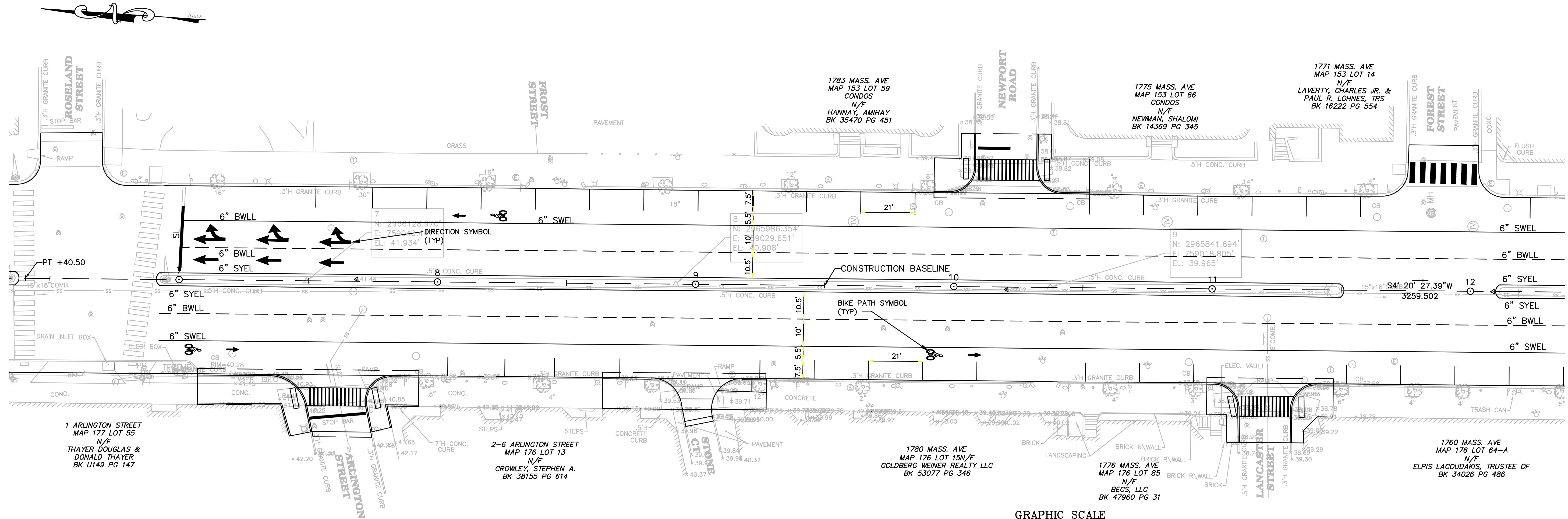
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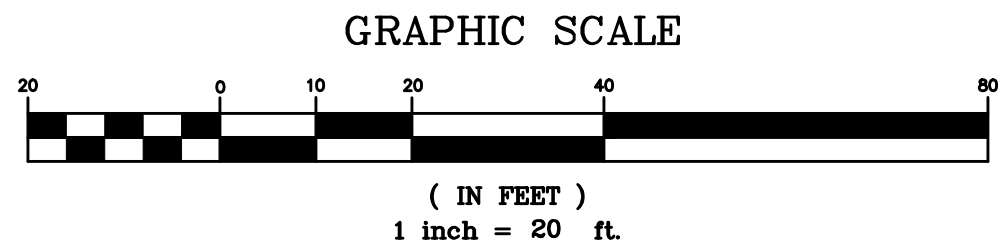
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Cambridge, Massachusetts
Department of Public Works

CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS

MASSACHUSETTS AVENUE
PAVEMENT MARKING PLAN

FILE NO.

CADD NO.

SCALE:

CONTRACT:

JOB NO.

DRBY

DSNBY

CHKBY

APPBY

LFK

LFK

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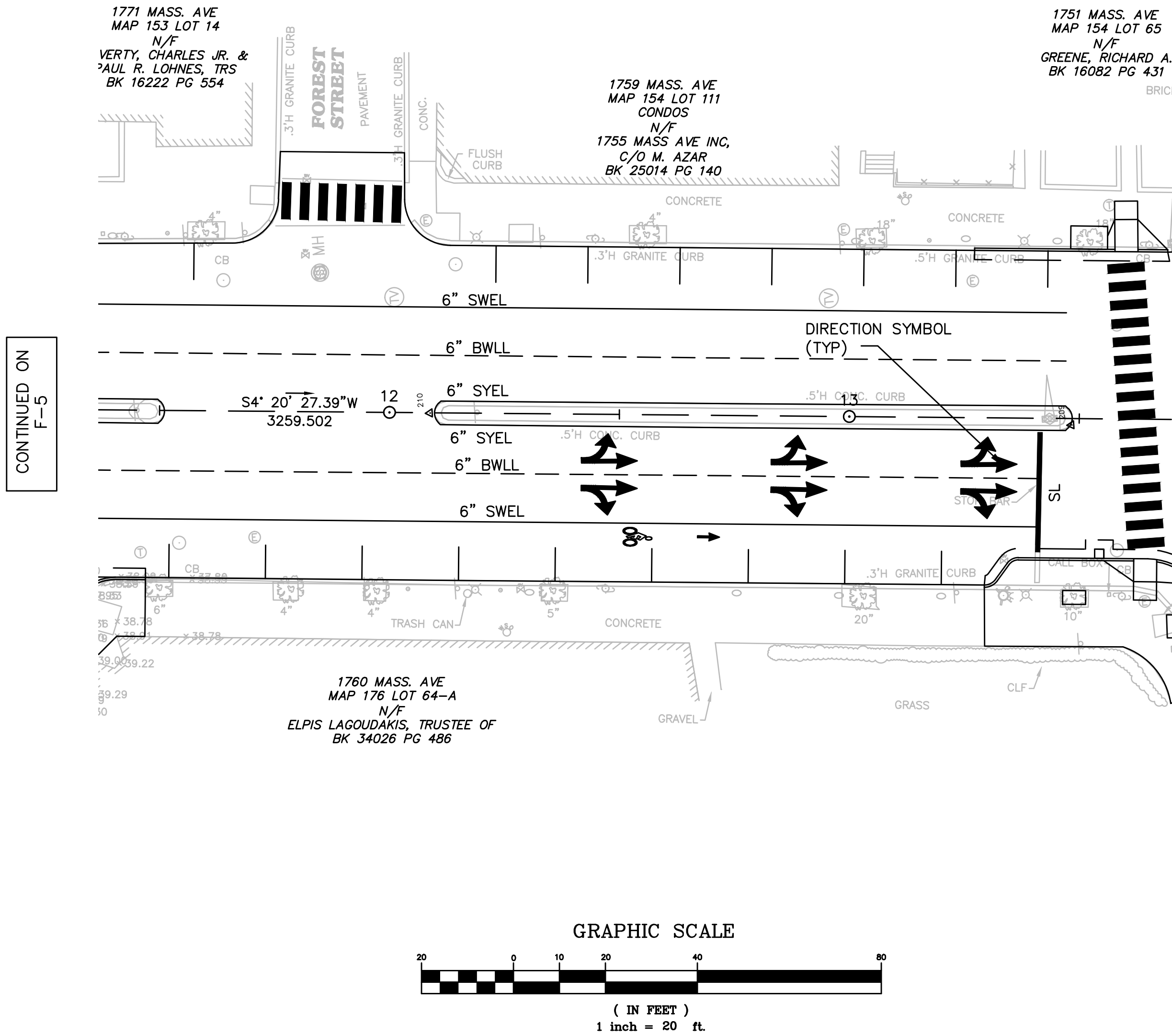
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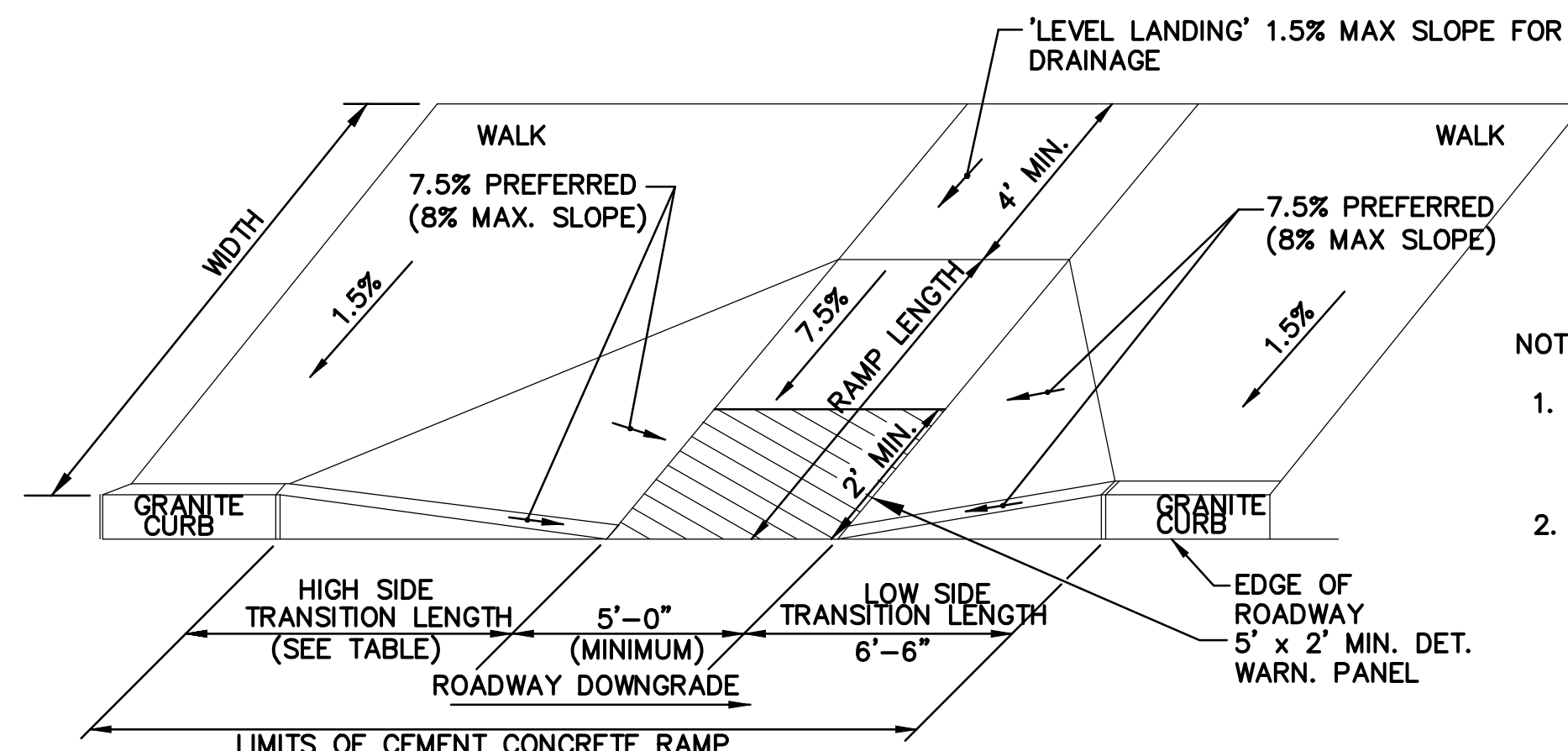
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CAMBRIDGE, MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS
MASSACHUSETTS AVENUE
PAVEMENT MARKING PLAN

CADD NO.	SCALE:	CONTRACT:	JOB NO.	DRBY	DSNBY	CHKBY	APPBY
-	AS NOTED	-	-	NAP	NAP	LFK	LFK

No.	Date	Dr.By	Ch.By	App.By	Description				
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1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
2. TOLERANCE FOR SLOPES SHALL BE 0.5%

ASPHALT EMULSION FOR TACK COAT
(RS-1) AT 0.07 GAL/SY OVER EXISTING
PAVEMENT.
PAVEMENT MILLING VARIABLE DEPTH TO
MEET PROPOSED GRADING

SUBBASE: 12" RECLAIMED ASPHALT PAVEMENT

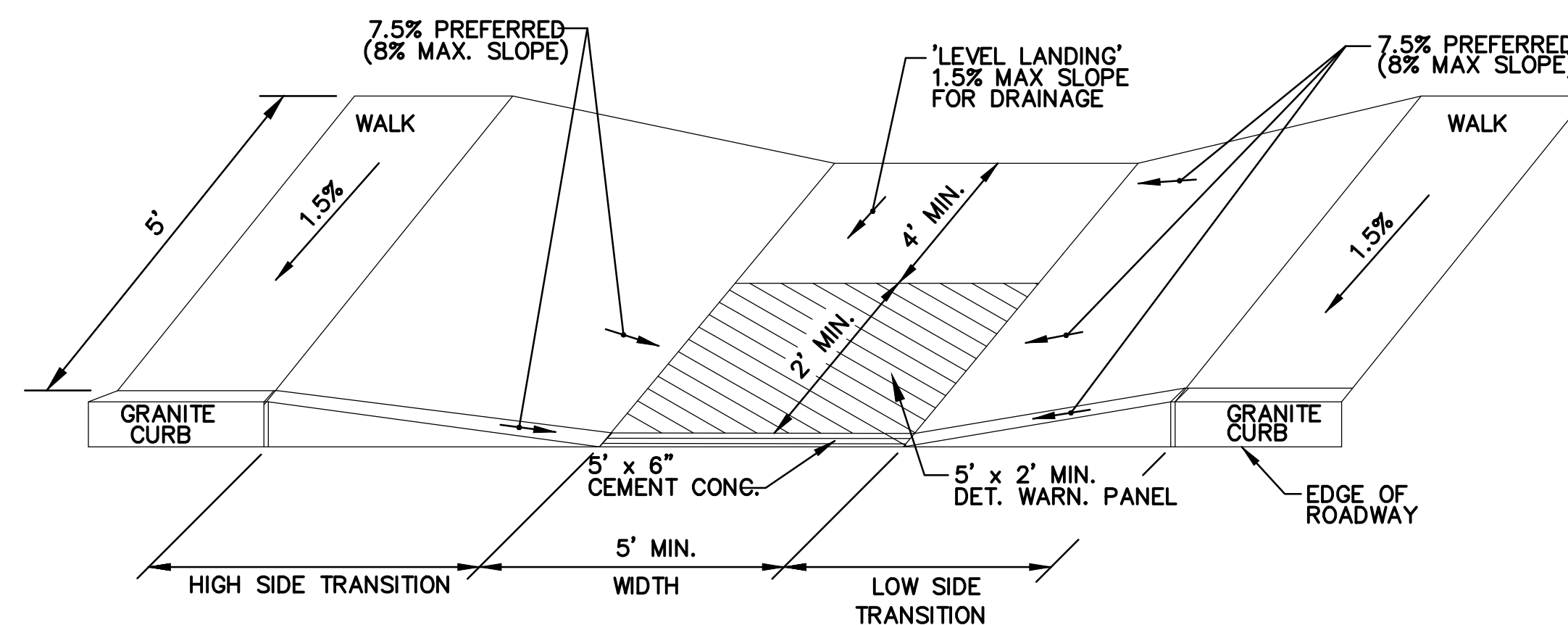
SUBBASE: 6" GRAVEL BORROW, TYPE B

SUBBASE: 6" GRAVEL BORROW, TYPE B

SUBBASE: 6" GRAVEL BORROW, TYPE B

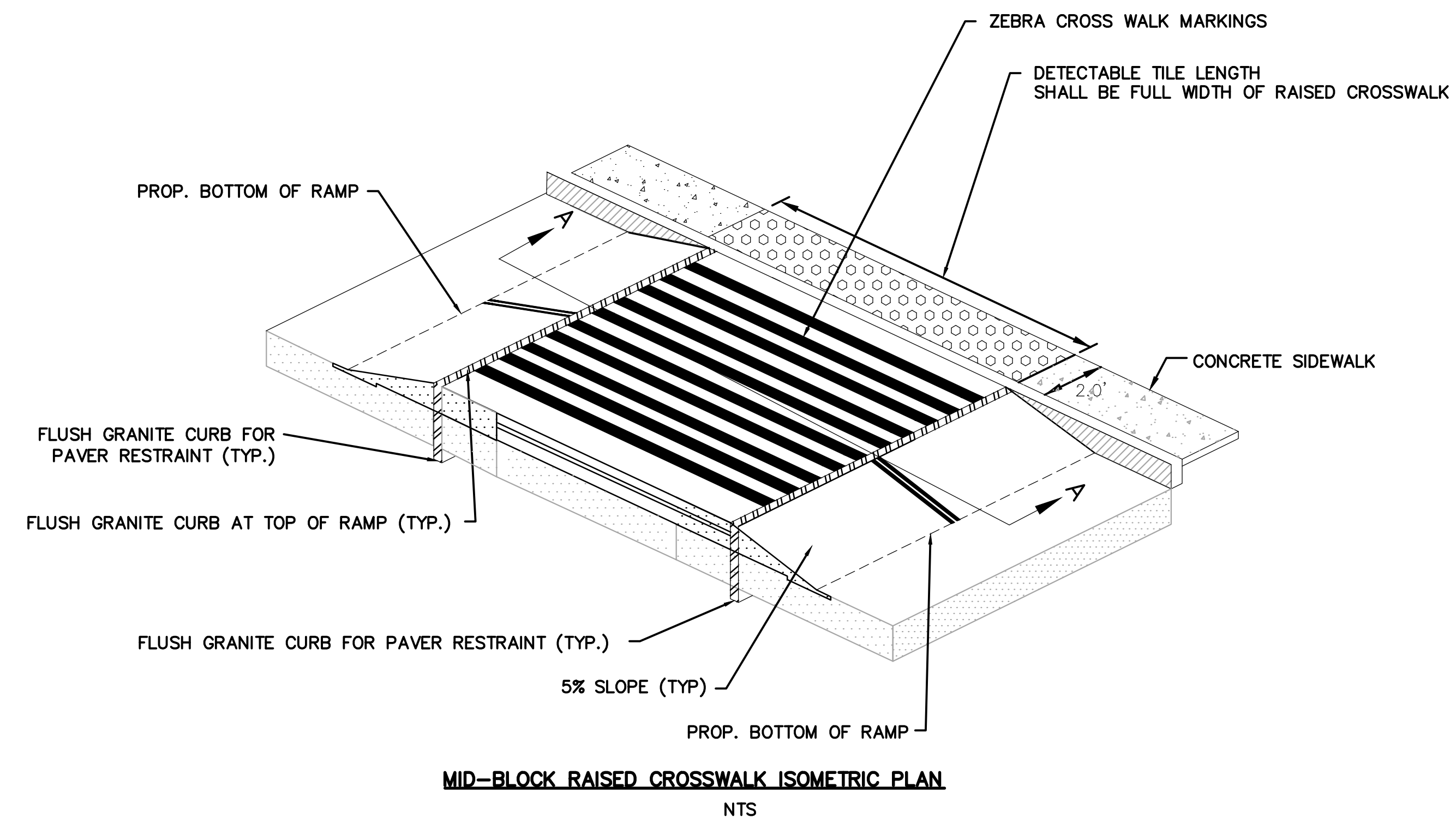
SUBBASE: NEOPRENE MODIFIED ASPHALT TACK COAT OVER
3/4" SAND SETTING BED OVER ASPHALT TACK COAT OVER
4" HOT MIX ASPHALT BASE OVER 8" GRAVEL BORROW, TYPE B

4" LOAM BORROW, SEEDED



1. INSTALL DETECTABLE WARNING PANEL ACCORDING TO MHD STD DWG M/E 107.6.SR.
2. TOLERANCE FOR SLOPES SHALL BE 0.5%

CEMENT CONCRETE PEDESTRIAN RAMP—TYPE 4
N.T.S.



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DEPARTMENT OF PUBLIC WORKS							
DETAILS							
CADD. NO.	SCALE:	CONTRACT:	JOB NO.	DR BY	DSN BY	CHK BY	APP BY LWK
—	AS NOTED	—	2120202	NAP			

DT-1

FILE NO. 2100209

SHEET OF

SECTION A-A

CEMENT CONCRETE WALK

N.T.S.

CEMENT CONCRETE DRIVE TYPE-1

N.T.S.

CEMENT CONCRETE DRIVE TYPE-2

N.T.S.

**CURB INSTALLATION IN FULL DEPTH
PAVEMENT LESS THAN 3' WIDE**

N.T.S

SECTION A-A

TREE PIT
N.T.S.

NOTE:
AROUND HYDRANTS, UTILITY POLES SIGN POSTS ETC., SEE
EXPANSION JOINT DETAIL

PLAN

SECTION A-A

BRICK WALK

N.T.S.

CROSSWALK MARKING DETAIL

N.T.S.

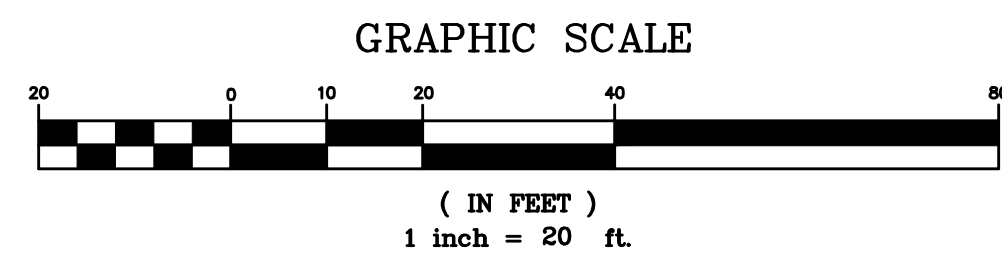
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CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS						
DETAILS						
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—	—			2120202	NAP	
					DSN BY	APP BY
						LFK

DT-2

FILE NO. 2100209

SHEET OF



(IN FEET)
1 inch = 20 ft.

1) FOR DETAILS SEE SHEETS D-1, D-2, L-2 AND L-3.

FILE NO. 1

SHEET OF

Diagram illustrating the cross-section of a tree pit installation, showing the layers and dimensions:

- Layers (from top to bottom):**
 - FINE GRAVEL IN GRATE OPENING
 - HORTICULTURAL PLANT MIX
 - TAPER STRUCTURAL SOIL BACK TO MEET SUBGRADE
- Dimensions:**
 - 4" TREE PIT DEPTH** (indicated on the left side)
 - 2' TREE GRATE WIDTH** (indicated at the bottom)
 - 4' TREE GRATE WIDTH** (indicated at the bottom)
 - 6' TREE PIT WIDTH** (indicated at the bottom)

4'-0"

8'-0"

GRANITE CURB

1'-6" OPENING

FRAME ANCHOR TYPE A ● BRICK PAVERS THIS SHEET

FRAME ANCHOR TYPE B ● CEMENT CONCRETE WALK THIS SHEET

CONCRETE HAUNCH BELOW GRATE

1-1/2" PVC SLEEVE TO ACCOMMODATE TREE FENCE POST (TYP) 3" (TYP)

FRAME ANCHOR TYPE C ● GRANITE CURB THIS SHEET

4' x 8' TREE GRATE PLAN DETAIL

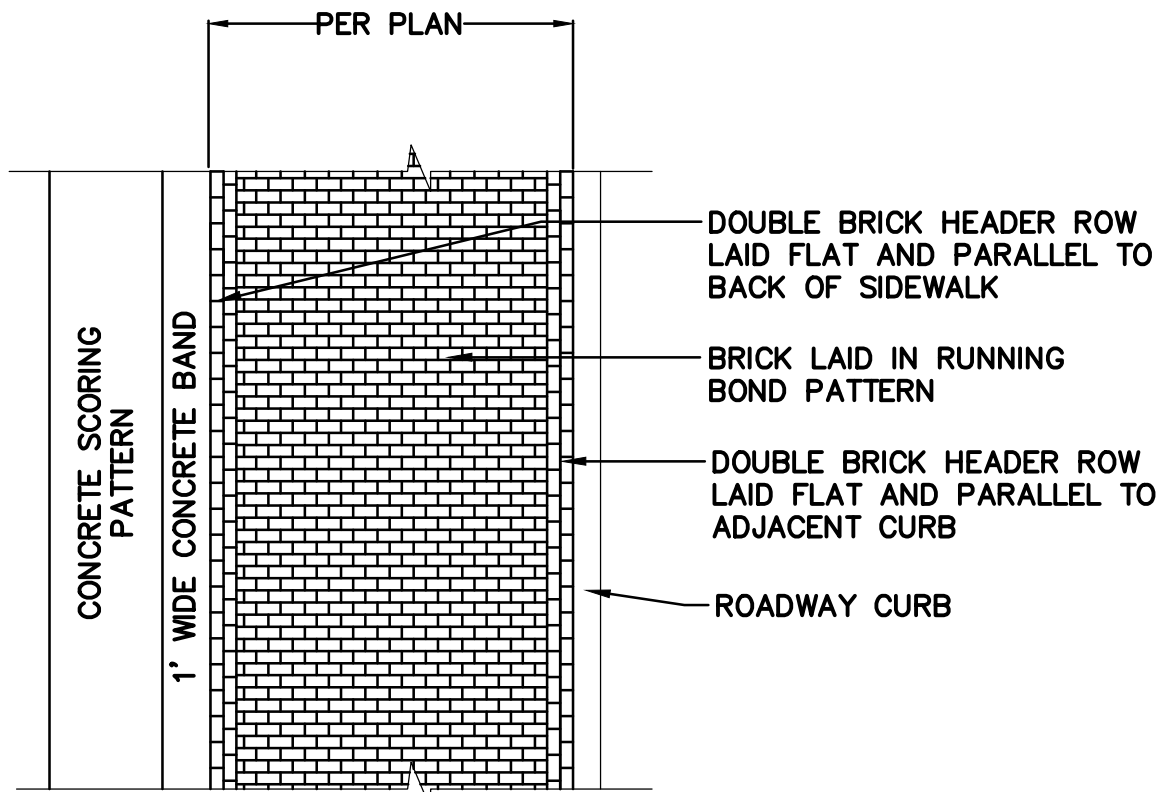
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FRAME ANCHOR TYPE A ● BRICK PAVERS THIS SHEET

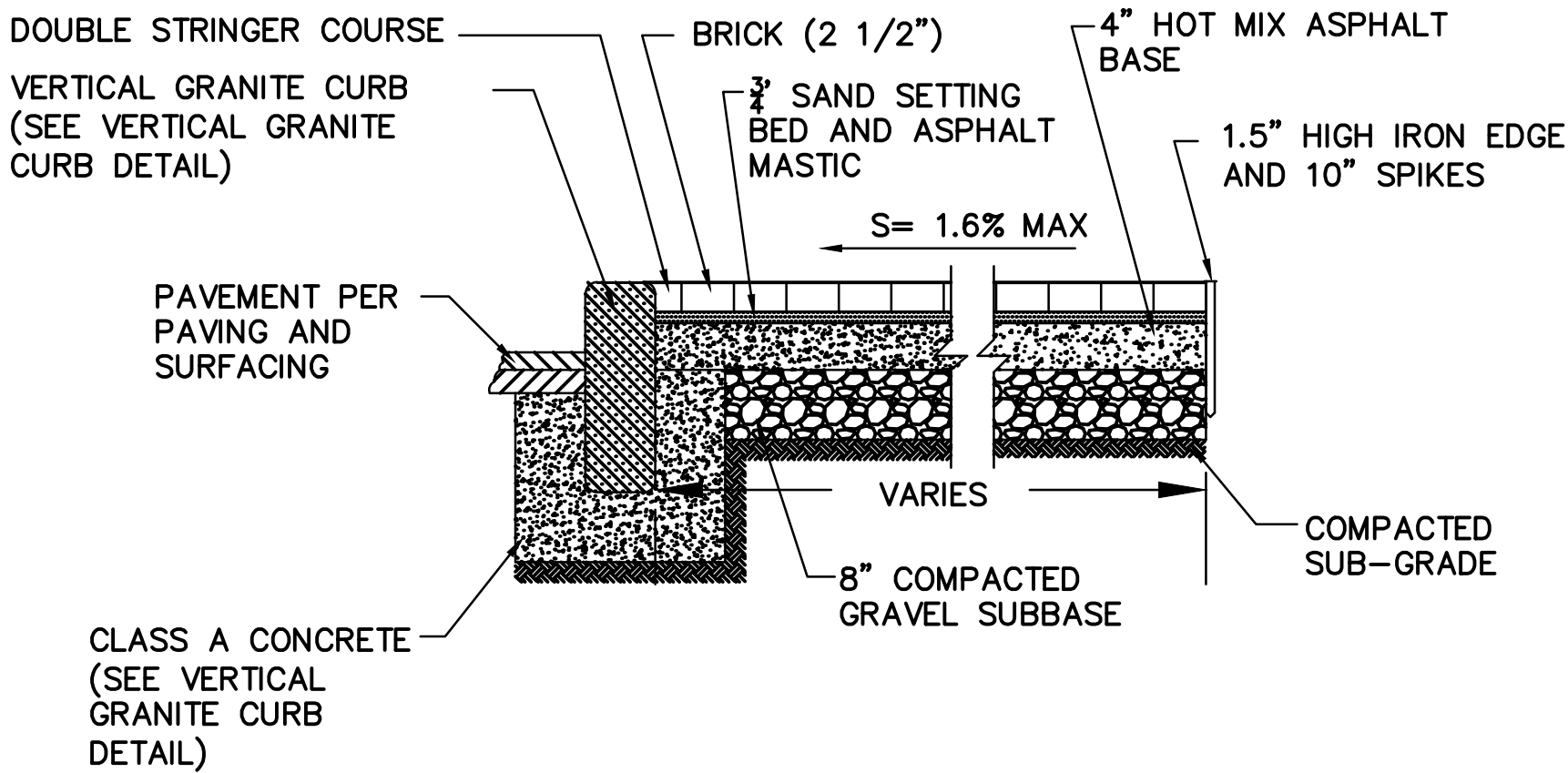
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CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS											
MASSACHUSETTS AVENUE DETAILS											
CADD NO.	SCALE:	AS	NOTED	CONTRACT:	—	JOB NO.	DR BY	DSN BY	CHK BY	APP BY	LFK
—	—						NAP	NAP	NAP		LFK



BRICK PAVING PATTERN
N.T.S.



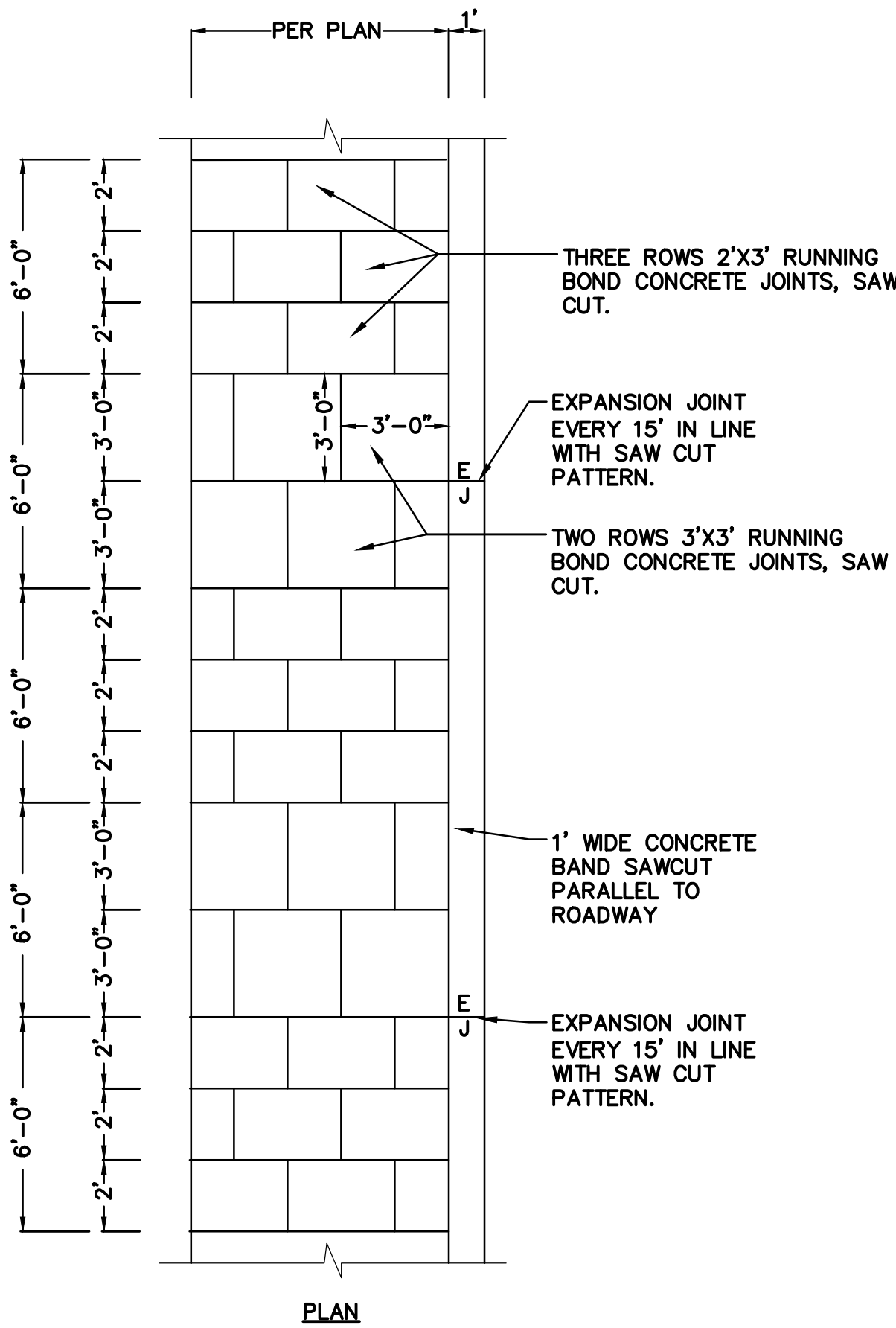
SECTION A-A

NOTES:
1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.

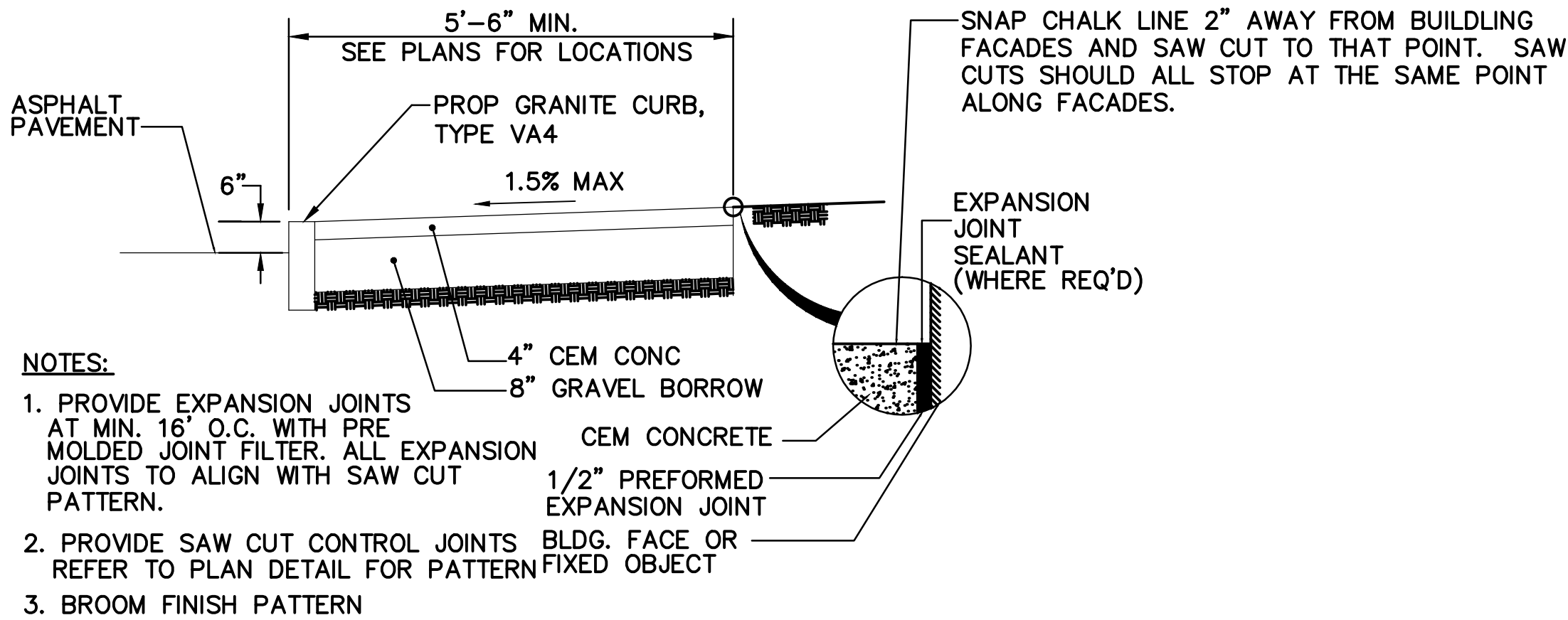
BRICK WALK
N.T.S.

NOTES:

- 1) CONTRACTOR SHALL CONSTRUCT 12' LONG SAMPLE SECTION OF DEMONSTRATION BLOCK SIDEWALK AT LOCATION TO BE DETERMINED BY DPW. SAMPLE SHOULD INCLUDE FULL WIDTH OF CONCRETE AND BRICK.



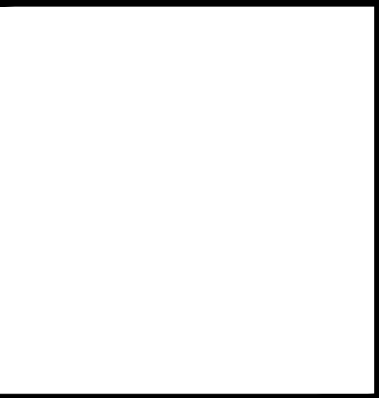
CONCRETE PAVEMENT SCORE JOINT PATTERN
N.T.S.



- NOTES:
1. PROVIDE EXPANSION JOINTS AT MIN. 16' O.C. WITH PRE MOLDED JOINT FILTER. ALL EXPANSION JOINTS TO ALIGN WITH SAW CUT PATTERN.
 2. PROVIDE SAW CUT CONTROL JOINTS BLDG. FACE OR REFER TO PLAN DETAIL FOR PATTERN FIXED OBJECT
 3. BROOM FINISH PATTERN

CEMENT CONCRETE WALK
N.T.S.

No.	Date	Dr.By	Chk.By	App.By	Description
		A	P	R	O
					V
					E
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REGISTERED PROFESSIONAL ENGINEER					DATE



CAMBRIDGE, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS	CHAPTER 90 CONTRACT 16 DESIGN AND MISCELLANEOUS SIDEWALKS	MASSACHUSETTS AVENUE DETAILS	CADD NO.	SCALE:	AS NOTED	CONTRACT:	JOB NO.	DRY	NAP	DSN.BY	NAP	CHK.BY	LFK	APP.BY	LFK
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